Kaleidoscope
The University of Kentucky Journal of Undergraduate Scholarship is a refereed journal published annually by the eUrKe! Office of the University of Kentucky. The journal is dedicated to the advancement of knowledge through the publication of the results of the intellectual pursuits of undergraduate students. The journal accepts reports of all forms of creativity and scholarship by undergraduate students including, but not necessarily limited to, artistic and musical creations, creative writing and poetry, and reports of studies and research in the humanities, the social, natural, and medical sciences, agriculture, business, architecture, and engineering. The journal is published in a traditional print format and as a Web site. The Web site may include creative materials, such as performances and art work, that cannot be reproduced on paper.

<www.uky.edu/kaleidoscope>

Editorial Board
Jeannine Blackwell, Acting Associate Provost for Undergraduate Education (German)
Robert S. Tannenbaum, Editor, Director, eUrKe!, Associate Director, Undergraduate Studies, Special Projects and Initiatives (Computer Science and Education)
Ruth Adams (Art)
Joanna M. Badagliacco, Director, Discovery Seminar Program (Sociology)
Raphael Finkel (Computer Science)
Bessie M. Guerrant, Co-Director, UK Undergraduate Research Program
Carl W. Lee (Mathematics)
David A. Nash (Dentistry)
Robert Rabel, Director of the Gaines Center for the Humanities
Robert Shapiro (Kinesiology and Health Promotions)
Gerald L. Smith (History)
Joseph W. Wilson (Chemistry, emeritus)
Jeff R. Worley, Editor, Odyssey

Staff
Robert S. Tannenbaum, Editor
Teresa L. Shear, Graphic Designer/Production Coordinator
Evie G. Russell, Programs Coordinator
Kathy R. Logsdon, Administrative Assistant
Kireet Pola, Web Designer/Programmer

“The Talisman.” Paul Serusier. 1888. Oil on wood. 26x21.5 cm.
Kaleidoscope, Volume 8
The University of Kentucky Journal of Undergraduate Scholarship is published once each year, at the beginning of the fall semester. All contributions to the journal are refereed by a standing editorial board and guest referees and editors. Articles, reports, and other creative works may be submitted by any undergraduate student at the University of Kentucky. All submissions must be accompanied by an endorsement by a University faculty member who has agreed to attest to the scholarly quality of the work and to serve as faculty mentor for editing and final submission of the work. Detailed guidelines for submission are available at www.uky.edu/kaleidoscope.

Deadlines for Volume 9, Fall, 2010:
January 11, 2010: Optional electronic letter of intent to submit, including a brief description of the nature and contents of the proposed submission sent to the editor. (rst@uky.edu)
April 22, 2010: Complete submission prepared according to the guidelines delivered electronically to the editor. (rst@uky.edu)
June, 2010: Notification of acceptance/rejection and instructions for suggested/revised revisions.
July, 2010: Final, revised submission delivered electronically to the editor.

National Conference on Undergraduate Research
“The mission of the National Conferences on Undergraduate Research (NCUR®) is to promote undergraduate research scholarship and creative activity done in partnership with faculty or other mentors as a vital component of higher education. The 2010 NCUR conference will be held April 15-17, 2010, at the University of Montana. Visit the NCUR Web site at http://ncur.org/basics/index.htm for general information on NCUR; visit <http://www.uwlax.edu/ncur2010/> for details and deadlines for the conference.

Oswald Research and Creativity Awards
All current UK undergraduate students are eligible to submit a paper or other creative work to be considered for an Oswald Research and Creativity Award. The competition categories in which papers and projects may be submitted include: (1) Biological Sciences; (2) Design (architecture, landscape architecture, interior design, etc.); (3) Fine Arts (film, music, painting, sculpture, videotape, etc.); (4) Humanities: Creative; (5) Humanities: Critical Research; (6) Physical and Engineering Sciences; and (7) Social Sciences. The deadline for submission is March 16, 2009. Visit the eUreKa! website at: www.uky.edu/eureka! for details, application forms, and official rules. See pages 136-38 for winning submissions from last year’s Oswald Awards program.

Office of Undergraduate Research and Creativity Awards
As a means of promoting educational experiences for students, eUreKa! offers Research and Creativity Grants during the summer term. The grants are intended to take advantage of the rich resources available through the libraries, the laboratories and, most especially, the academic personnel at the University of Kentucky. Undergraduates in all areas of intellectual inquiry are eligible, and students at many different levels of matriculation have received support. The Deadline to submit applications is February 25, 2010. For details regarding eligibility, and application forms visit the eUreKa! website at: www.uky.edu/eureka!

UK Undergraduate Research Program
The University of Kentucky Undergraduate Research Program (UKURP) creates research partnerships between first- and second-year students and faculty researchers. The program offers students the opportunity to work and learn alongside a research faculty member. Undergraduate students are given the real-life experiences of working in laboratories and other scholarly settings; developing a research abstract; presenting their projects at symposiums and professional conferences; publishing their findings; and meeting others in the international community of scholars. In other words, students are given a jump-start on their career. For more details and deadlines for applications, visit www.uky.edu/eureka!

Additional Information
Additional information regarding undergraduate scholarship and creativity programs, conferences, competitions, and opportunities is posted on the Web site of the Office of Undergraduate Research and Creative Activities, eUreKa! at www.uky.edu/eureka!

Upcoming Undergraduate Scholarship Events and Deadlines

Kaleidoscope, Volume 8

National Conference on Undergraduate Research

The mission of the National Conferences on Undergraduate Research (NCUR®) is to promote undergraduate research scholarship and creative activity done in partnership with faculty or other mentors as a vital component of higher education. The 2010 NCUR conference will be held April 15-17, 2010, at the University of Montana. Visit the NCUR Web site at http://ncur.org/basics/index.htm for general information on NCUR; visit <http://www.uwlax.edu/ncur2010/> for details and deadlines for the conference.

Oswald Research and Creativity Awards
All current UK undergraduate students are eligible to submit a paper or other creative work to be considered for an Oswald Research and Creativity Award. The competition categories in which papers and projects may be submitted include: (1) Biological Sciences; (2) Design (architecture, landscape architecture, interior design, etc.); (3) Fine Arts (film, music, painting, sculpture, videotape, etc.); (4) Humanities: Creative; (5) Humanities: Critical Research; (6) Physical and Engineering Sciences; and (7) Social Sciences. The deadline for submission is March 16, 2009. Visit the eUreKa! website at: www.uky.edu/eureka! for details, application forms, and official rules. See pages 136-38 for winning submissions from last year’s Oswald Awards program.

Office of Undergraduate Research and Creativity Awards
As a means of promoting educational experiences for students, eUreKa! offers Research and Creativity Grants during the summer term. The grants are intended to take advantage of the rich resources available through the libraries, the laboratories and, most especially, the academic personnel at the University of Kentucky. Undergraduates in all areas of intellectual inquiry are eligible, and students at many different levels of matriculation have received support. The Deadline to submit applications is February 25, 2010. For details regarding eligibility, and application forms visit the eUreKa! website at: www.uky.edu/eureka!

UK Undergraduate Research Program
The University of Kentucky Undergraduate Research Program (UKURP) creates research partnerships between first- and second-year students and faculty researchers. The program offers students the opportunity to work and learn alongside a research faculty member. Undergraduate students are given the real-life experiences of working in laboratories and other scholarly settings; developing a research abstract; presenting their projects at symposiums and professional conferences; publishing their findings; and meeting others in the international community of scholars. In other words, students are given a jump-start on their career. For more details and deadlines for applications, visit www.uky.edu/eureka!

Additional Information
Additional information regarding undergraduate scholarship and creativity programs, conferences, competitions, and opportunities is posted on the Web site of the Office of Undergraduate Research and Creative Activities, eUreKa! at www.uky.edu/eureka!
CONTENTS

Welcome from the President  2
From the Editor’s Viewpoint  3
Gender and Capital Punishment: The Case of Gaile Owens/Jenna Brashear  4
An Analysis of United States-Iran International Relations/James Tyler Chapman  13
The Personal is the Political: Artemisia Gentileschi’s Revolutionary Self-Portrait as the Allegory of Painting/Virginia L. Conn  23
The Agricultural Footprints on the Environment/Philip Houtz  30
Development of Transgenic Lines to Support Plant Cell Biology Research/Kristin Kopperud  36
The Crisis of Identity in Post-Revolutionary Cuban Film: A Sociological Analysis of Strawberry and Chocolate/Andrew Zachary Shultz  41
Childhood Obesity: What Role Does Public Policy Play?/Shannon Turbeville  48
Power and Pride: The Mythologization of the Cossack Figure in Russian History and Its Impact on Modern Russian National Identity/Rachael Ulrich  52
Insights into Alzheimer’s Disease: The Levels of Signaling Proteins in Brain of Control Subjects Versus Brain from Subjects with Mild Cognitive Impairment/Georgianne F. Tiu  62
Power and the Cultural Other: Insights from Jane Eyre and Wide Sargasso Sea/Stacy Wilder  70
Commedia dell’Arte, Masks and Masking: A Modern Application for the Production of Commedia Masks/Elizabeth Lisa Weber  75
The Chellgren Center for Undergraduate Excellence  88
Beckman Scholars Program  90
Lesley Mann  91
Clay Turner  92
Showcase of Undergraduate Scholars  93
eUreKa!  94
Summer Research & Creativity Grants  95
Undergraduate Research and Travel Fund 129
Undergraduate Awards and Honors 131
Oswald Research & Creativity Program 135
Special Programs 138

Kaleidoscope, Volume 8, 2009